

CLAIMS

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1. Dual mode radio frequency reception device of the type enabling reception firstly of multi-carrier broadcast signals in a first frequency band (11), and secondly radio positioning signals in a second frequency band (12), (13),

10 characterized in that it comprises a single preprocessing module (21), particularly including a pass-band antenna filter (211) in which the pass-band includes at least the said first and second frequency bands, and outputting firstly to a first processing system (22) for the said multi-carrier broadcast signals, and secondly to a second system (23) for 15 processing the said radio positioning signals.

2. Device according to claim 1, characterized in that the said single preprocessing module (21) also comprises at least one of the elements belonging to the group comprising:

- 20 - a first low noise amplifier (212);
- a first transposition stage (213) to a first intermediate frequency, by multiplying by a first transposition frequency;
- a second amplifier (214).

25 A 3. Device according to ~~either of claims 1 or 2~~, characterized in that the said first processing system (22) comprises first digitization means (226) and the said second reception system comprises second digitization means (236), the said first and second 30 digitization means being controlled by the same analog-digital conversion frequency.

4. Device according to claim 3, characterized in that the said first digitization means (226) include a delta-sigma pass-band modulator.

- claim 3*
- A 5. Device according to ~~either of claims 3 or 4,~~ characterized in that the said second digitization means (236) include a "1-bit" quantifier.
- A 6. Device according to *claim 1*, characterized in that it also comprises a frequency synthesizer (31 to 31a) outputting into the said first and second processing systems, capable of generating at least two frequencies belonging to the group comprising:
- the said first transposition frequency;
 - the said digital conversion frequency,
 - a second transposition frequency used by a second transposition stage to a second intermediate frequency included in the said first processing system;
 - a second transposition frequency used by a second transposition stage to a second intermediate frequency included in the said second processing system.
- A 7. Device according to *any one of claims 1 to 6*, characterized in that the said first processing system (22) is used for the reception of DAB signals and in that the second processing system (23) is used for the reception of GPS signals.
- A 8. Device according to *any one of claims 1 to 7*, characterized in that the said first frequency band is between about 1452.192 MHz and 1491.392 MHz, and in that the said second frequency band is between about 1574.42 MHz and 1576.42 MHz.
9. Portable multimedia receiver, characterized in that it comprises a dual mode radio frequency reception device according to *any one of claims 1 to 8*.

*ADD
C1*